Interoperable Communications Local Grant Application
Radio Cache

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I. Purpose:

To provide $5 million from the Department of Homeland Security, Homeland Security Grant Program in local grant funding for regional and multi-discipline interoperability projects involving the purchase and maintenance of strategic radio caches.

II. Background:

The Commonwealth Interoperability Coordinator's Office (CICO) within the Governor's Office of Commonwealth Preparedness (OCP) was created to coordinate interoperability initiatives, communicate information, and facilitate discussions on communications interoperability across the Commonwealth. These responsibilities are accomplished through the annual development and implementation of the Commonwealth of Virginia Strategic Plan for Statewide Communications Interoperability (Plan). The Plan outlines the Commonwealth's Fiscal Year 2015 goals and annual initiatives to improve interoperable communications across Virginia and aligns with the FY 2005 State Strategy (attached). The Commonwealth is currently in its third year of Plan implementation.

The State Interoperability Executive Committee (SIEC) and Advisory Group serve as steering bodies for the interoperability effort. The SIEC and Advisory Group are comprised of Virginia's public safety associations representing first responders, emergency support functions, and state agencies. Together, the CICO, SIEC and Advisory Group are responsible for implementing the Plan and informing its development based on their wide range of expertise and years of experience.

The SIEC provides all funding recommendations for interoperability to OCP. In the past two years the SIEC has coordinated grant recommendations that awarded a total of $4.2 million to 60 localities to support local voice and data communication projects.

This year the SIEC has been given the opportunity to make recommendations to OCP for $5 million in FY 2006 Department of Homeland Security Grant Program (HSGP) funds. **Localities may only submit one application.**

The Commonwealth is funding this local grant application through two funding sources, Law Enforcement Terrorism Prevention Program (LETPP) funds and the State Homeland Security Program (SHSP) funds.

FY 2006 LETPP funding specifically focuses upon the prevention of terrorist attacks and provides law enforcement and public safety communities working with their private partners' funds to support the following activities: intelligence gathering and information sharing through enhancing/establishing fusion centers; hardening high value targets; planning strategically; continuing to build interoperable communications; and collaborating with non-law enforcement partners, other government agencies and the private sector. LETPP funds should be focused on enhancing the Target Capabilities unique to terrorism.

FY 2006 SHSP funding remains primarily focused on enhancing capabilities to prevent, protect against, respond to, or recover from CBRNE, agriculture, and cyber terrorism incidents. However, in light of several major new national planning priorities, which address such issues as pandemic influenza and the aftermath of Hurricane Katrina, the allowable scope of SHSP activities include catastrophic events, provided that these activities also build capabilities that relate to terrorism.

III. Focus:

During Virginia FY 2007, members of the governance structure and additional subject matter experts assembled an Initiative Action Team (IAT) to address Initiative 7 of the FY 2007 Strategic Plan that states:

"Research opportunities and facilitate policy development of strategic radio caches"

The IAT developed statewide policies and procedures for radio caches that are locally owned, regionally operated and, if large enough, used as a resource statewide during emergencies or large planned events. Applicants must:

- o Demonstrate compliance with the statewide radio cache policies and procedures provided in Appendix B that includes five types of radio caches that vary in functionality and coverage (Type V representing the lowest level of functionality and Type I representing the highest level)
- o Identify existing cached resources in the region
- o Work with fellow awardees by developing an Initiative Action Team (IAT) to coordinate the strategic purchase of radio cache equipment

- Through the IAT, work with fellow awardees, VDEM and a representative from the Commonwealth's Attorney General's Office to determine standard Memorandum of Understanding (MOU) requirements for the radio cache
  - Appendix D: *"Level III Hazardous Materials Emergency Response Agreement MOU"* will be used as a guide in developing the radio cache MOU agreement
- Purchase and establish a radio cache within a region

To greatly improve the overall preparedness of the Commonwealth during major events, the SIEC is currently seeking applications for Type I, II and III radio caches only. These caches will be locally or regionally owned, regionally operated, and deployable statewide to respond to major emergencies. Type IV-V caches will be established using future funding sources.

IV. Evaluation Process and Criteria:

The SIEC and Advisory Group will work with the CICO to form grant review teams to evaluate applications based on standard evaluation criteria. Recommendations will be provided to OCP for final approval and award.

Evaluation Criteria will include, but will not be limited to:

- Grant application owner is a local or regional public safety agency (or local law enforcement agency if applying for LETPP funds)
- Compliance with the focus area
- Location within the Commonwealth in terms of tactical deployment possibilities
- Support of the Strategic Plan for Statewide Communications Interoperability
- Focus on regional and multi-disciplinary collaboration
- Impact on regional and statewide interoperability
- Completion of application including Application Narrative, Requirements Verification Form (Provided in Section VIII), and a letter stating regional commitment to compliance with the statewide radio cache policies and procedures from all participating localities.

V. Requirements:

To be eligible for state funding for improving public safety interoperable communications applicants must adhere to the following:

1. Previous state funding received by the applicant must be spent in its entirety. Additionally, applicants may not use HSGP funds to support projects that have already been budgeted for with local funding.
2. Applicants must be **National Incident Management System** (NIMS) certified and compliant. For more information please visit www.fema.gov/emergency/nims/index.shtm.
3. Applicants and their application partners must endorse Virginia's **Common Language Protocol** for day-to-day and major emergency situations. For information regarding the endorsement of the best practice, please visit www.interoperability.virginia.gov/commonlanguage.html.
4. Equipment must be on the Department of Homeland Security's Grants and Training (G&T) **Authorized Equipment List (AEL)**. For more information on the AEL, please visit the Responder Knowledge Base at www.rkb.mipt.org/lists.cfm.

5. Subscriber radios purchased must be programmed with **federal interoperability channels within that radio's frequency band (UTAC, VTAC and NPSPAC)**.
6. Proof of FCC licenses must be provided when appropriate.
7. Data sharing equipment must comply with the Department of Homeland Security's and Emergency Interoperability Consortium's **Extensible Markup Language (XML)**. For more information please review Appendix C: Federal Grant Guidance.
8. All new voice systems should be compatible with the ANSI/TIA/EIAA-102 Phase 1 (**Project 25 or P25**) standards. Funding requests by agencies to replace or add radio equipment to an existing non-P25 system will be considered if there is an explanation as to how their radio selection will allow for improving interoperability or eventual migration to interoperable systems.
9. Applicants must be **compliant with the federal grant guidance** provided in Appendix C.

Only one application per locality will be accepted for this funding. Submissions should be coordinated through your Chief Administrative Officer (CAO) to ensure that only one application is submitted. Multiple submissions may immediately disqualify all submissions from that locality.

To verify compliance with these requirements, a Requirements Verification Form is provided in Section VIII. Please complete this form to show your adherence to the above requirements.

VI. Application Timeline and Grant Performance Period:

March 26-May 4, 2007	Applications Submitted
May 4-May 19, 2007	Evaluate Applications
May 2007	Award Funding
July 15, 2007	Progress Report Due
15 days after the end of each Quarter until May 31, 2008	Progress Report Due
May 31, 2008	Funds must be spent

Quarter Schedule:
Jan 1-March 31
April 1 – Jun 30
Jul 1 – Aug 31
Sept 1 – Dec 31

All grant funds awarded under this process are subject to a performance period of August 2006 to August 2008. Extensions may be granted on a case by case basis.

VII. Application Submission Requirements:

All submissions must be coordinated through your local Chief Administrative Officer's office to ensure that no more than one submission is received from each locality.

Attached is the Homeland Security Grant Application for Federal Funds. For an electronic version of this application, please go to www.vaemergency.com/grants/forms/VDEM_Grant_Application.xls

The following steps must be completed to ensure a successful application:

1. Complete the Homeland Security Grant Application for Federal Funds (attached)
2. Complete the Project Narrative (Section VIII of this application)
3. Complete the Requirements Verification Form
4. Meet the Application Deadline of May 4, 2007

Five (5) printed copies of the grant request should be sent via certified mail to:

Cheryl Adkins
Virginia Department of Emergency Management
10501 Trade Court
Richmond, Virginia 23236

Grant applications must be received by COB May 4, 2007 for consideration.

VIII. Application Narrative Guidance and Forms

APPLICATION NARRATIVE GUIDANCE

Please use the following format for the narrative portion of your submission. Answer each question in its entirety.

(1) Explain how your request supports the establishment of a strategic radio cache and how you intend to use the cache regionally, and statewide. Briefly describe your tactical location and the statewide benefit to placing a radio cache in your region.

(2) Describe the proposed project.
The description of the project should include all of the following:
- Project Purpose
- Scope of Work
- Timeline and Major Milestones

Please also describe:
- The Type of cache you are purchasing (Type I, Type II or Type III based on the guidance in Appendix B)
- How this request fits into and aids achievement of regional interoperability plans
- How the project will be managed including deployment, operations, maintenance, and training. The Commonwealth encourages creative solutions to the deployment and maintenance of these caches, and supports multi-jurisdictional ownership and multi-year maintenance contracts.
- Plans for paying on-going costs and sustaining the cache after the grant period

(3) Describe how your locality collaborated on a regional and multi-disciplinary level to develop this grant application and how collaboration will be continued.
Explain how this project will benefit all of those that collaborated on the development of the application. Include in this description:
- A listing of the localities/agencies that participated in the development of the application
- How collaboration will be continued through the implementation and operation of the project
- How the collaboration will be managed (provide an organizational structure indicating information flow and decision-making)
- A list and brief summary of existing cooperative agreements or memoranda of understanding (MOUs) among localities that will aid in this collaboration
- A plan and timeline for the development of additional cooperative agreements or MOUs needed to continue collaboration and ensure project success

(4) Provide a budget for the project

Please fill out the attached budget form, Request for Funds Project Expenditure Report, for the proposed project. For an electronic copy of this form, please go to www.vaemergency.com/grants/forms/RequestforFundsProjectExpenditureNEW.xls.

Review Sections 2.2 and 4 of the Federal Grant Guidance in Appendix C for a summary of these cost categories and allowable expenses. Respondents are encouraged to leverage existing training and exercise programs (including state sponsored exercises), and infrastructure to support their project. Please indicate within budget documentation where these resources will be leveraged even if a cost is not associated with them.

Include within your budget documents, a proposed project timeline that shows the allocation of funds by activity to show how and when the grant funds will be spent throughout the grant period.

REQUIREMENTS VERIFICATION FORM

This form should be filled out and submitted with your grant application and reflects the information provided in Section V of the grant application. For more information about any of the elements of this form please refer to Section V of this document. Applications submitted without this form will be disqualified. This form may be downloaded and filled out electronically from **www.interoperability.virginia.gov**.

Requirement	Status	Explanation
Previous state funding	Total Amount Received in Local Grants: _____ Description of funded projects: _____ _____ _____ Were all funds expended? Yes No If No, please provide an explanation of why funds were not spent and attach correspondence with the state to this form.	
National Incident Management System (NIMS) certification and compliance	Is your agency compliant with NIMS training requirements? If yes, please list the training that is required by your agency. If no, please discuss plans to become compliant.	
Common Language Protocol Endorsement and Implementation	Has your agency/region endorsed the common language protocol that was announced through Governor's press release on October 2, 2006? If yes, please provide a copy of your endorsement letter on your agency's letterhead and briefly describe your plans for implementation.	

	If no, please explain why you have not yet endorsed the common language protocol and any future plans regarding this issue.	
Equipment on Authorized Equipment List	Is your equipment on the Authorized Equipment List (AEL)? All radio cache equipment must be on the AEL.	
Federal Interoperability Channel Programming	If you are planning on purchasing subscriber radios, will they be programmed with Federal Interoperability Channels (UTAC, VTAC or NPSPAC)? If yes, no explanation is necessary. If no, please explain.	
FCC Licensing	If applicable, please provide a copy of your FCC licenses	
Extensible Markup Language Compliance	If you are planning to purchase data sharing equipment will it be XML compliant? Is yes, no explanation is necessary. If no, please explain.	
Project 25 Compatibility	If the equipment you plan on purchasing is not Project 25 compatible please provide an explanation.	

Appendix A: Glossary and Definitions

Advisory Group: A group of local, regional, and state public safety and government practitioner communities that provide expertise and guidance to the State Interoperability Executive Committee and Commonwealth Interoperability Coordinator's Office to develop and implement the annual Commonwealth of Virginia Strategic Plan for Statewide Communications Interoperability.

Authorized Equipment List (AEL): A U.S. Department of Homeland Security Grants and Training (G&T) approved equipment list located within the Responder Knowledge Base.

Common Language Protocol: A protocol developed by Virginia practitioners and announced via Governor's press release on October 2, 2006 calling for a move to plain English for all transmissions with the exception of four scenarios that will remain in standard coded language for responder safety. The protocol has been approved for use within the Commonwealth by the National Incident Management System (NIMS) Integration Center. To find out more about the protocol and the standard coded language scenarios contact the CICO at (804) 692-0137.

Commonwealth Interoperability Coordinator's Office (CICO): The state designated body located within the Governor's Office of Commonwealth Preparedness (OCP) for the coordination of interoperability projects across the Commonwealth including the implementation of the Commonwealth of Virginia Strategic Plan for Statewide Interoperable Communications.

Cooperative Agreement: A legal instrument used by an agency to enter into a mutually beneficial relationship

Discipline: Refers to the public safety disciplines of law enforcement, fire and EMS and may include other emergency support functions if applicable

Extensible Markup Language (XML): A U.S. Department of Homeland Security and Emergency Interoperability Consortium coordinated simple and very flexible text format derived from SGML for data exchange. Additional guidance and information is provided in Appendix C: Federal Grant Guidance.

Governance: The process by which stakeholders are involved in the process of planning and managing a program or project.

Homeland Security Grant Program (HSGP): The U.S. Department of Homeland Security's grant program for all hazards preparedness, response and recovery. Each year, the Commonwealth of Virginia submits an application to DHS for these funds and must allocate received funding to localities (80%) and state entities (20%).

Infrastructure: The hardware and software needed to complete and maintain a radio communications system

Interoperability: Refers to the ability of emergency response agencies to talk across disciplines and jurisdictions exchanging voice and data with one another when needed and authorized using standard operational protocols.

Interoperability Channels: Radio channels designated by the Federal Communications Commission for public safety interoperability. Channels may be programmed into subscriber radios for use during mutual aid scenarios. Channels are designated based on frequency band and include UHF Tactical Channels (UTAC), VHF Tactical Channels (VTAC), and National Public Safety Planning Advisory Committee (NPSPAC) Channels.

Interoperability Continuum: A tool developed by the U.S. Department of Homeland Security's SAFECOM Program to show the complexity of the issue of interoperability.

Jurisdiction: The territory within which power or authority can be exercised

Law Enforcement Terrorism Prevention Program (LETPP): One of the programs of the Homeland Security Grant Program, LETPP funds are designated for use by law enforcement in the prevention of terrorism. Interoperable communications is a key part of prevention.

Locality: Any Virginia county or city

Local Law Enforcement Agency: A law enforcement agency charged with policing a specific locality or localities

Memorandum of Understanding: A guiding document for collaboration between and among localities, regions, the state and/or the federal government.

Milestone: An event or purchase that marks a major turning point in a project. For example, the move from the planning phase of a project to the procurement phase.

Multi-discipline: Refers to a project that considers multiple public safety disciplines

Mutual Aid Channels: Local channels that have been designated by a non-federal agency for use during mutual aid events.

National Incident Management System (NIMS): NIMS integrates existing best practices into a consistent, nationwide approach to domestic incident management that is applicable at all jurisdictional levels and across functional disciplines in an all-hazards context. The six components of NIMS include: Command & Management, Preparedness, Resource Management, Communications & Information Management, Supporting Technologies and Ongoing Management & Maintenance.

National Public Safety Planning Advisory Committee (NPSPAC): Denotes the interoperability channels available for use in mutual aid situations in the 800 MHz frequency band.

Operability: Refers to the ability of an emergency responder to communicate within a system.

Project 25: A standards-based approach for migrating to multi-jurisdictional and multi-disciplinary interoperability. For more information please read Appendix C: Federal Grant Guidance.

Radio Cache: A cache of radios and other communications equipment that are consistently maintained for use during planned mutual aid and emergency events.

Regional: Refers to a formalized relationship among 3 or more localities working together towards a common goal

Responder Knowledge Base (RKB): A web-based information service for the emergency responder community funded by the Department of Homeland Security (DHS) and hosted by the National Memorial Institute for the Prevention of Terrorism (MIPT). RKB operates as a public service, with no cost to users and no cost to information contributors such as product manufacturers. Thousands of jurisdictions and departments, as well as virtually all State Administrative Agencies, now use the RKB on a regular basis to obtain grant guidance and unbiased product information.

Scope of Work: A detailed outline of the tasks and activities that will be completed to accomplish a desired outcome. The scope of work should also include a general approach for how each task or activity will be accomplished.

Statewide Agencies Radio System (STARS): Facilitates the communications of 21 participating state agencies by upgrading the existing Virginia State Police land mobile and microwave radio networks. STARS will create an integrated, seamless, statewide, wireless voice and data communications system designed to meet the needs of participating agencies.

State Homeland Security Grant Program (SHSGP): One of the programs of the Homeland Security Grant Program, SHSGP funds may be used by any public safety agency.

State Interoperability Executive Committee (SIEC): Formally established through Executive Order 30, the SIEC provides recommendations to the Governor's office through the Commonwealth Interoperability Coordinator's Office. The SIEC consists of 14 representatives form local and state public safety associations and government.

Strategic Plan for Statewide Communications Interoperability: The Strategic Plan is the guiding document for the improvement of communications interoperability and compliance for the Commonwealth of Virginia. Virginia Code 9.1-1200 requires the annual update and implementation of the Plan.

Voice over Internet Protocol (VoIP): A technology that allows you to make voice calls using a broadband Internet connection instead of a regular (or analog) phone line

Appendix B: Radio Cache Compliance Documentation

Definition of Common Terminology

- *Incident Commander: (Type I-V)*
  - On the ground leading/commanding person who may request the radio cache for an emergency incident
- *Cache Contact: (Type I-V)*
  - Persons responsible for processing initial emergency request for radio cache deployment: might not be true to every situation. Might be another available number to call rather than Dispatch. Smaller localities might just have a POC.
  - Liaisons between Incident Commander and Radio Cache Manager and/or Cache Decision Leader
- *Radio Cache Manager: (Type I-III)*
  - Person from hosting locality responsible for maintaining the radio caches operational capacity
  - Person from hosting locality responsible for the physical deployment and set up of cache at requested destination
- *Cache Decision Maker: (Type I-III)*
  - Person from hosting locality responsible for deciding if an emergency or planned activity request within the region or from the state is granted
    - *Note: In some situations the radio cache manager and decision maker may be the same person*
- *Deployable Trained Personnel: (Type I-III)*
  - Team from hosting locality that accompanies the cache through deployment, set-up, distribution, use and collection
  - Works closely with Radio Cache Manager

Minimum Capabilities & MOU Requirement Guidelines Based on Radio Cache Type

	Type I	Type II	Type III	Type IV	Type V
Number of Radios	501+ radios	301-500 radios	101-300 radios	101-200 radios	25-100 radios
Radio Interoperability Standard	• P25 compatibility • Statewide-deployable cache equipment must be compatible with other statewide-deployable caches	• P25 compatibility • Statewide-deployable cache equipment must be compatible with other statewide-deployable caches	• P25 compatibility • Statewide-deployable cache equipment must be compatible with other statewide-deployable caches	• P25 compatibility unless exception is granted	• P25 compatibility unless exception is granted
Additional Equipment	• 2 rechargeable and one high shelf life disposable batteries per portable radio • 1 speaker mic • 1 carrying case or clip per radio • Appropriate	• 2 rechargeable and one high shelf life disposable batteries per portable radio • 1 speaker mic • 1 carrying case or clip per radio • Appropriate	• 2 rechargeable (all) and one high shelf life disposable (deployable radios only) batteries per portable radio • 1 speaker mic • 1 carrying case or	• 2 rechargeable (all) and one high shelf life disposable (deployable radios only) batteries per portable radio • 1 speaker mic • 1 carrying case or	• 2 batteries per portable radio • 1 speaker mic • 1 carrying case or clip per radio • Appropriate chargers • Extra Batteries

	charging capacity for 100% of fleet within 24 hours • At least one audio interconnect (portable gateway) • Consider: Satellite communications (phone, etc)	charging capacity for 100% of fleet within 24 hours • At least one audio interconnect (portable gateway) • Consider: Satellite communications (phone, etc)	clip per radio • Appropriate charging capacity for 100% of fleet within 24 hours • At least one audio interconnect (portable gateway)	clip per radio • Appropriate charging capacity for 100% of fleet within 24 hours	charged with 10 year shelf life
System Requirements.	• Trunking capable based on baseline study • Blend of frequencies - at least 100 radios per band • Radio programming capability on-site • Repeaters • Power (generator)	• Trunking capable based on baseline study • Blend of frequencies - at least 75 radios per band • Radio programming capability on-site • Repeaters • Power (generator)	• Trunking capable based on baseline study • Blend of frequencies (need to have all four bands to go with gateway device)	• Trunking capable unless exception is granted based on baseline study	• Trunking capable unless exception is granted based on baseline study

700/800 MHz	• Spectrum use defined by operating region
	  o 800 MHz should be able to do both 700 and 800 MHz
	  o Must have the spectrum available to support cache
	• Minimum 500 talk groups (upper tier radio) – system type specific
	• ITAC, VTAC, UTAC, in all radios
	• Encryption capable (no cost?)
		• Spectrum use defined by operating region
		  o 800 MHz should be able to do both 700 and 800 MHz
		  o Must have spectrum available to support cache
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					• ITAC, VTAC, UTAC, in all radios
					• Encryption capable (no cost?)

UHF, VHF, Low Band	• State	• State	• State	• State	• State

	Interoperability Channels • National Interoperability Channels	Interoperability Channels • National Interoperability Channels	Interoperability Channels • National Interoperability Channels	Interoperability Channels • National Interoperability Channels	Interoperability Channels • National Interoperability Channels
Designated personnel (Cache owner determines level of effort of personnel. I.e. FTE vs. additional responsibility of existing staff)	▪ Radio cache manager ▪ Appropriate decision maker ▪ Deployable trained personnel	▪ Radio cache manager ▪ Appropriate decision maker ▪ Deployable trained personnel	▪ Radio cache manager ▪ Appropriate decision maker ▪ Deployable trained personnel	▪ Designated contact personnel	▪ Host location general support
Deployable Personnel	At least 4 designated and trained personnel are available for deployment (one team member is COML). Personnel can be multi-jurisdictional/multi-agency.	At least 4 designated and trained personnel are available for deployment (one team member is COML). Personnel can be multi-jurisdictional/multi-agency.	At least 2 designated and trained personnel are available for deployment (one team member is COML). Personnel can be multi-jurisdictional/multi-agency.	N/A	N/A
Deployment ratio	100% deployable within region; 100% deployable outside of region (with spectrum/frequency considerations)	100% deployable within region; 100% deployable outside of region (with spectrum/frequency considerations)	100% deployable within region; 50% deployable outside of region (with spectrum/frequency considerations)	100% deployable within region; 25% deployable outside of region (with spectrum/frequency considerations)	100% deployable within region; 0% deployable outside of region
Transportation Requirements	• En-route within 2 hours • Trailer or dedicated vehicle • Tower with a trailer (elevated antennae system)	• En-route within 2 hours • Trailer or dedicated vehicle	• En-route within 2 hours • Trailer or dedicated vehicle	En-route within 2 hours	En-route within 2 hours
Inventory Management	Yes-automated preferred	Yes-automated preferred	Yes-automated preferred	Yes	Yes
Training and Exercises	Yes	Yes	Yes	Yes	Yes
Additional requirements	Self sustaining team (people, power, food, water, shelter, etc) – 72 hours	Self sustaining team (people, power, food, water, shelter, etc) – 48 hours	N/A	N/A	N/A
Regional MOU	Same as Type V plus	Same as Type V plus	Same as Type V plus	Same as Type V plus	MOU between hosting

Requirements	MOU will also: • Commit region to 100% cache availability for state-wide deployment • Identify on call radio cache manager, appropriate decision maker, and deployable trained personnel.	MOU will also: • Commit region to 100% cache availability for state-wide deployment • Identify on call radio cache manager, appropriate decision maker, and deployable trained personnel.	MOU will also: • Commit region to 50% cache availability for state-wide deployment • Identify deployable equipment • Identify on call radio cache manager, appropriate decision maker, and deployable trained personnel.	MOU will also: • Commit region to 25% cache availability for state-wide deployment • Identify deployable equipment	locality and participating region. MOU will: 1) Identify host locality 2) Identify host organization 3) Identify and provide 24/7 contact information for cache location 4) Identify regions' operational protocols and procedures 5) Identify all first responder organizations within the region that will be provided a detailed and up to date cache inventory, regional deployment form and cache contact list.
Region to State MOU Requirements	Same as Type IV plus MOU will also: • Agree to Virginia EOC deployment form for cache • Identify radio cache manager, appropriate decision maker, and deployable trained personnel	Same as Type IV plus MOU will also: • Agree to Virginia EOC deployment form for cache • Identify radio cache manager, appropriate decision maker, and deployable trained personnel	Same as Type IV plus MOU will also: • Identify 50% of cache that is statewide deployable • Agree to Virginia EOC deployment form for statewide-deployable equipment • Identify radio cache manager,	MOU will: • Identify 25% of cache that is statewide-deployable • Agree to Virginia EOC deployment form statewide-deployable equipment • Owner commits to providing the Virginia EOC a detailed cache	• No MOU required • Owner commits to providing the Virginia EOC a detailed cache inventory and cache contact list and maintaining an updated inventory list *(Note: While this type is not intended for state wide deployment, it is*

			appropriate decision maker, and deployable trained personnel *(Note: While 50% of this type is not intended for state wide deployment, it is helpful for the Virginia EOC to maintain a central list of all radio cache resources)*	inventory and cache contact list and maintaining an updated inventory list *(Note: While75% of this type is not intended for state wide deployment, it is helpful for the Virginia EOC to maintain a central list of all radio cache resources)*	*helpful for the Virginia EOC to maintain a central list of all radio cache resources)*

Commonwealth Radio Cache
Policies, Procedures and Operational Protocols by Type

The following statewide policies, procedures and operational protocols are developed as a minimum requirement for each of the 5 Types of radio caches purchased with state interoperable communications grant funding. Radio cache host agencies shall understand and comply with the responsibility of radio cache ownership. Additionally, the host agency shall agree to adhere to and enforce these policies, procedures, and operational protocols.

Minimum Policies, Procedures and Operational Protocols Guidance/Requirements for Types I-V

Prior to Radio Cache Purchase	- Develop a strategy for procuring radio cache or enhancements to existing cache - Leverage interoperability baseline information (estimated completion date June 30, 2007) - Develop regional emergency and scheduled event deployment forms and procedures for internal use - Develop Inventory Control Strategy - Establish dedicated personnel as appropriate based on Type - Develop/update MOUs with relevant jurisdictions - Adopt and agree to enforce statewide policies, procedures, and operational protocols - Agree to standardize compatibility of all statewide-deployable caches by coordinating with peer radio cache managers throughout the Commonwealth

By the first grant reporting period	• Show progress towards the region's radio cache strategy • Inventory radios and develop an authorized cache list • Send authorized cache list and cache point of contact to regional and Virginia EOCs
Maintenance	• Fully maintain and ensure the cache is ready for deployment at all times • Exercise rechargeable batteries at least twice a year • Label authorized cache equipment appropriately • Consider and coordinate maintenance costs (replacement or upgrading) for cache equipment within the host jurisdiction or region
Operational	**Rules of Use:** All agencies shall conform to the following **rules of use** for their cache radios: • **National Incident Management System**: Use of an Incident Command System compliant with the National Incident Management System is required for use of any regional interoperability resource. • **Plain/Common language**: All Communications shall be in plain or common language. Radio codes, acronyms and abbreviations are to be avoided as they may cause confusion between agencies. Additionally, it should be understood that plain words such as "help", "assistance", "repeat" and "back-up" may have different operational meanings to different agencies. The word "Help" should be used alone unless in the context of a life-threatening situation. Requests for assistance or backup should clarify the reason for the request. • **Unit Identification**: Agency name or identifier shall precede unit identifier.

Statewide Deployment	Requests may be made for emergency incidents, training & exercises
	
	Deployment within regions may be conducted following the regional policies and procedures developed by the cache owner(s). When in use within the region the radio cache manager or point of contact must inform the Virginia EOC of its status for Types I-III.
	
	Interoperable Communications Request: Emergency (Outside of Region)
	• Responsible party within the locality must request statewide-deployable resources from the Virginia EOC providing the following information:
	    o SALTT – Size, Amount, Location, Type and Time (deployment and duration)
	    o User's agency
	    o On-scene agencies requiring interoperability
	    o Reason for request/type of event
	    o User/requestor and/or servicing dispatch contact phone number
	• It is the requesting agency's responsibility to maintain appropriate internal procedures to ensure that

requests are only passed to the Virginia EOC if the request originated from, or was approved by, a person with the authority to accept fiscal responsibility for radio cache deployment costs
- The request for deployment of a radio cache indicates acceptance of fiscal responsibility for the cost of any damaged or lost equipment

Interoperable Communications Request: **Scheduled Events and Training (Outside Region)**
- Application for deployment of the radio cache for scheduled events should be initiated no later than 30 days and no more than 120 days prior to the event
  - Some events will require last minute requests, i.e. funerals, protests, etc.
- The request shall be made using the proper request form directly to and be granted by the cache decision maker (Type I-III) or appropriate personnel (Type IV-V) for the host radio cache
- The request shall be granted by the priority of the request and by date the request was received
- The requesting jurisdiction may be responsible for pick-up and return of cache equipment
- Inventory and inspection will occur upon return of the radios and any lost or damaged radios will be billed to the jurisdiction returning the radios
- Any radios loaned for scheduled events will be subject to recall for a higher priority emergency incident
- The host agency receiving a request for radio cache deployment will notify the other regional radio cache host agencies of the deployment, if applicable
- Once a radio cache has been committed or deployed for a special event, contact shall be made to provide information regarding the number of radios deployed, the host locality name, the receiving localities name, and the name and date of the event to:
  - Communications
  - Firefighter, HazMat, Urban Search and Rescue
  - Information and Planning
  - Law Enforcement
- A request for tactical repeaters and interconnect devices will involve a planning meeting with the cache manager or COML to review the events communications plan and will require the deployment of Cache personnel to maintain the equipment during the event
- The radio cache manager is responsible for telling the Virginia EOC about the status of their cache when in use

Radio Cache Deactivation
- The Incident Commander in conjunction with the Emergency Manager determines when the radio cache is no longer required
- The Incident Commander is responsible for coordinating the return of cache
- At the end of the incident, the Incident Commander or a designee is responsible for inventorying all radios returned to the cache

	○ Before leaving the incident scene, the Incident Commander will determine if any radios have not been returned to the radio cache and note the user and/or agency to which the radio was distributed ○ If the missing radios can not be recovered at the incident scene, information will be provided to the appropriate point of contact for resolution - The radios will be returned to the host radio cache site within 72 hours after the incident is over **Problem reporting and Resolution** - Agencies using radio caches may report any problems with the specific radio cache to the radio cache manager (Type I-III) or appropriate personnel (Type IV-V) from which the cache was obtained - The cache manager (Type I-III) or appropriate personnel (Type IV-V) from which the cache was obtained will be responsible for ensuring effective resolution to problems that exist
Training & Exercises	- Cache resources within a jurisdiction shall be used for training and exercise activities at a minimum of twice per year - A training report shall be provided annually to the Commonwealth Interoperability Coordinator's Office - Equipment shall be maintained in a consistent operational condition and users shall be familiar with its function
Inventory Control	- A complete inventory of the caches personnel and equipment shall be conducted on an annual basis and sent to regional and Virginia EOCs - Each radio cache must be maintained in a condition available for immediate deployment within 2 hours of a request - It is the responsibility of the host jurisdiction(s) to maintain control over their equipment - Replacement or upgrading of cache equipment shall be coordinated by the host jurisdiction(s)
Governance	- MOUs shall be developed between host locality, region, and the state - Existing Mutual Aid MOUs will be acknowledged - All radio cache managers for Type III and above will participate on the State Interoperability Advisory Group and fulfill the responsibilities of membership of the group - Conflict resolution: The State Interoperability Executive Committee will make final recommendations to resolve conflicts

All VHF radio caches are required to have the following channels programmed:

Frequency	Frequency	CTCSS	CTCSS	Description
Mobile RX	Mobile TX	Mobile RX	Mobile TX	
154.265	154.265	None	None	1FIR7
154.295	154.295	None	None	1FIR11

155.340	155.340	None	None	1EMS14
155.205	155.205	None	None	
155.7525	155.7525	156.7	156.7	1CAL18
151.1375	151.1375	156.7	156.7	!TAC5
154.4525	154.4525	156.7	156.7	1TAC13
158.7375	158.7375	156.7	156.7	1TAC22
159.4725	159.4725	156.7	156.7	1TAC23

All UHF radio caches are required to have the following channels programmed:

Frequency	Frequency	CTCSS	CTCSS	Description
Mobile RX	Mobile TX	Mobile RX	Mobile TX	
453.800	453.800	173.8	156.7	TECAP
453.800	453.800	173.8	173.8	
453.2125	453.2125	156.7	156.7	4CAL27D
453.4625	453.4625	156.7	156.7	4TAC28D
453.7125	453.7125	156.7	156.7	4TAC29D
453.8625	453.8625	156.7	156.7	4TAC30D

All 800 MHz radio caches are required to have the following channels programmed:

Frequency	Frequency	CTCSS	CTCSS	Description
Mobile RX	Mobile TX	Mobile RX	Mobile TX	
821.0125	866.0125	156.7	156.7	8CAL90 NSPAC National Calling Channel
821.5125	866.5125	156.7	156.7	8TAC91 NSPAC National Tactical Channel 1
822.0125	867.0125	156.7	156.7	8TAC92 NSPAC National Tactical Channel 2
822.5125	868.0125	156.7	156.7	8TAC93 NSPAC National Tactical Channel 3
823.0125	866.5125	156.7	156.7	8TAC94 NSPAC National Tactical Channel 4
866.5125	867.0125	156.7	156.7	8TAC91D NSPAC National Tactical Channel 1 direct
867.0125	867.0125	156.7	156.7	8TAC92D NSPAC National Tactical Channel 2 direct
867.5125	867.5125	156.7	156.7	8TAC93D NSPAC National Tactical

				Channel 3 direct
868.0125	868.0125	156.7	156.7	8TAC94D NSPAC National Tactical Channel 4 direct

All 700 MHz radio caches are required to have the following channels programmed:

Frequency Mobile RX	Frequency Mobile TX	CTCSS Mobile RX	CTCSS Mobile TX	Description
39 & 40	764.24375	$061F	$061F	7CAL59D (calling)
63 & 64	764.39375	$061F	$061F	7EMS60D (EMS)
119 & 120	764.74375	$061F	$061F	7TAC63D (public safety)
143 & 144	764.89375	$061F	$061F	7FIR64D (fire)
199 & 200	765.24375	$061F	$061F	7TAC67D (public safety)
223 & 224	765.39375	$061F	$061F	7LAW68D (police)
319 & 320	765.99375	$061F	$061F	7TAC73D (public service
681 & 682	768.25625	$061F	$061F	7CAL75D (calling)
697 & 698	768.35625	$061F	$061F	7EMS77D (EMS)
761 & 762	768.75625	$061F	$061F	7TAC79D (public safety)
777 & 778	768.85625	$061F	$061F	7FIR81D (fire)
841 & 842	769.25625	$061F	$061F	7TAC83D (public safety)
857 & 858	769.35625	$061F	$061F	7LAW85D (police)
937 & 938	769.85625	$061F	$061F	7TAC89D (public service)

Appendix C: Federal Grant Guidance

1. INTRODUCTION

Federal Fiscal Year (FY) 2007 Appropriations make available grant funding to enhance communications interoperability across the Nation. By definition, communications interoperability refers to the ability of emergency response agencies to talk across disciplines and jurisdictions via radio communications systems, to exchange voice and data with one another on demand, in real time, when needed, and as authorized. In an effort to coordinate the way in which funding is allocated and to maximize the prospects for interoperable communications, SAFECOM, a communications program of the Office of Interoperability and Compatibility has developed some recommended grant criteria in concert with representatives of the emergency response community. What follows is an outline of recommended grant funding eligibility (including applicants and activities), application criteria, guidelines, and resources to assist the emergency response community in strengthening interoperability. Frequently asked questions regarding the document, including additional technical information on Project 25 standards and use of VoIP equipment, can be found on the SAFECOM Web site (www.safecomprogram.gov/SAFECOM/grant/default.htm).

This guidance reflects a comprehensive approach to interoperability—one that understands that the problem of interoperability is not solely technological. In reality, technology is just one of several critical elements necessary for the development of a robust interoperability solution. As Secretary Chertoff explained at the May 8, 2006 Tactical Interoperable Communications Conference, "…the biggest barrier to interoperability is not technology…[the challenge] has to do with, rather, human beings. It has to do with how do we get people to be able to use this equipment in a way that makes interoperability not just a theoretical possibility, or a technological possibility, but an actual, workable, day-to-day solution."

Achieving effective interoperability across the Nation requires dedicating resources to improving such critical elements as governance, standard operating procedures, training and exercises, and regular use of interoperable capabilities. Further, it requires strong leadership in and among organizations—leadership that promotes and engages in extensive, coordinated, multi-jurisdictional, and multi-disciplinary planning efforts for interoperability. This guidance provides Federal grant programs with recommended criteria to ensure that the limited funding available for emergency response communications is used in a way that targets all of the critical elements mentioned above. In addition, it provides the emergency response community with guidance, tools, and resources for the development of interoperability solutions.

2. ELIGIBILITY

Section 2.1 – Eligible Applicants

Federal funds that are allocated for improving emergency response communications and interoperability should only be provided to emergency response agencies or organizations at the regional, state, local, or tribal level. They include:

- Emergency Medical Services (EMS) agencies
- Fire service agencies
- Law enforcement agencies
- An organization representing the above agencies
- Any emergency response agency listed as an eligible applicant in Federal grant programs that include this guidance

In the case of LETPP funding, only law enforcement agencies are eligible.

Section 2.2 – Eligible Activities

The following are the eligible activities for which Federal funding awarded for interoperable voice and/or data communications may be used, subject to the statutory authority of the grantor agency:

- **Planning and Management** activities, including:

  - Establishing a governance structure for emergency response interoperability projects
  - Conducting a capabilities assessment
    - Operational (standard operating procedures, training, usage)
    - Technical
  - Strategic planning
    - Operational (standard operating procedures, training, usage)
    - Technical
  - Implementation and management

- **Equipment Acquisition** for the purposes of:

  - Building emergency response communications systems
  - Upgrading/enhancing emergency response communication systems and equipment
  - Replacing emergency response communication systems and equipment
  - Maintaining emergency response communication systems and equipment

- **Training and Exercising** on the following:

  - Use of equipment and systems
  - Use of standard operating procedures

For more information on eligible activities, see Section 4.

3. APPLICATION CRITERIA

Section removed due to redundancy

4. PRINCIPLES AND GUIDELINES FOR ELIGIBLE ACTIVITIES

Section 4.1 – Planning and Management

Federal funding is provided to applicants for planning activities related to interoperability. When planning for improved interoperability, a number of critical elements must be addressed. The Interoperability Continuum (Figure 1) depicts the critical elements for successful planning and implementation of a robust interoperability solution, including governance, standard operating procedures, technology, training/exercises, and usage of equipment. Applicants should demonstrate an understanding of this framework and the way in which each element is interdependent. For example, if an applicant proposes procurement of new equipment, the proposal should include plans for procedures, training, and exercises to ensure the best use of that equipment. More detailed information on the Interoperability Continuum can be found on the SAFECOM Web site at http://www.safecomprogram.gov.

Figure 1
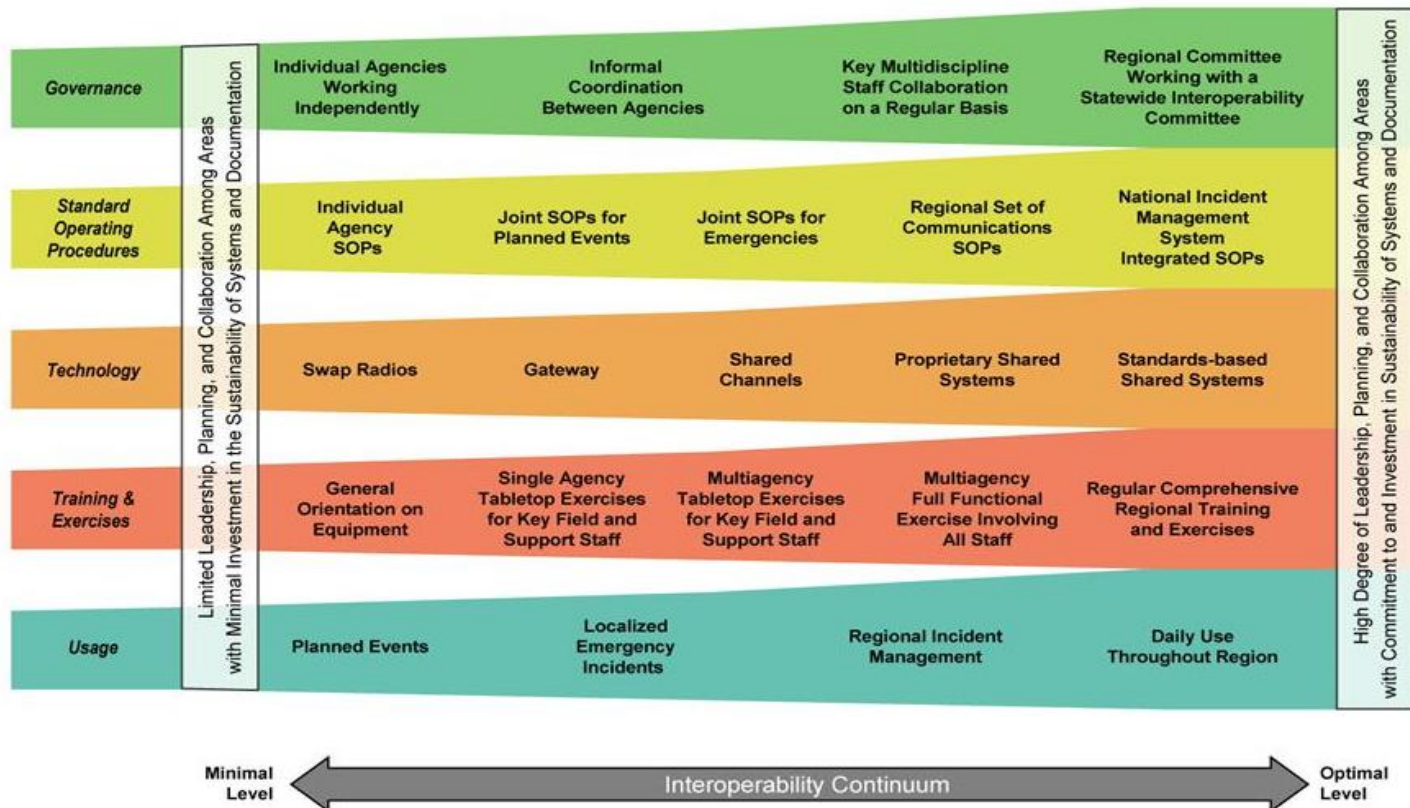
In addition to incorporating an understanding of these five critical elements, planning activities in general should be conducted on a regional or statewide basis and take into account both short- and long-term goals. Once planning activities are established, consistent leadership and management are needed to oversee development, implementation, and maintenance of the interoperability projects.

Eligible Planning and Management Activities
Planning and management activities include establishing a governance structure, conducting capabilities assessments (for both operational and technical capabilities), strategic planning (for both operational and technical needs), and managing the implementation of a strategic plan (equipment acquisition, standard operating procedures (SOPs), and training development, etc.) After the governance structure is established, assessment, planning, and implementation should be carried out by the committee or working groups that are established as part of the structure.

Establishing a Governance Structure
Consistent leadership and management are needed to ensure that planning, equipment procurement, training, and funding are in place when developing an emergency response communications improvement or interoperability project. A common governing structure should improve the policies, processes, and procedures of any major project by enhancing communication, coordination, and cooperation, by establishing guidelines and principles, and by reducing any internal turf battles. This group should consist of local, tribal, state, and Federal entities as well as representatives from all pertinent emergency response disciplines. Frequently, when multiple agencies or jurisdictions are involved, this management structure takes the form of a governing body that makes decisions, solicits funding, and oversees the planning, implementation, and management of an interoperability initiative. When establishing a governance structure the following should be considered:

- Is the communications project consistent with similar efforts in the region?
  - Are agreements in place with other agencies or jurisdictions that illustrate cooperative management of the communications improvement or interoperability project?
- Does the project have the support of the relevant state or local governing authority and political leadership?
- What other funding sources has the applicant sought for the ongoing administrative costs of program management?
- Has a mechanism been established for future, sustained funding?

Capability Assessments
A common planning activity is the development of a capability assessment—a baseline understanding of existing resources. It is encouraged that capability assessments be developed by a discipline-neutral party to help ensure the assessment meets the needs of a multi-discipline/multi-jurisdiction response. For additional considerations on capability assessments, see sections below, Operational Considerations for Capability Assessments and Strategic Planning, and Technical Considerations for Capability Assessments and Strategic Planning.

Strategic Planning
When engaging in planning, nearby agencies or jurisdictions from other disciplines or other local, tribal, state, or Federal partners should be included. For those developing statewide strategic plans, specific criteria can be found in Section 5.
The following questions should be considered for strategic planning in general:

- Who are the stakeholders that need to be involved in the planning?
- Which decision makers should be involved?
- What type of technical and field expertise will be needed to develop the plan?
- Will outside expertise be needed to develop this plan? If so, what kind?
- What are the roles and responsibilities of all agencies that are involved? (Include a list of partnering agencies.)
- Do mutual response agreements include interoperable communications?
- What type of governing structure exists to improve the processes for executing any planned project?

In addition to taking an inclusive approach, planning should take into account both short- and long-term goals. The following questions should be considered:

- What should be done in the first phase?
- How many phases will the plan require?
- How much time is needed to accomplish the plan?
- What are the technical solutions available to address the problem in the short- and long-term?
- What funding is available to address the problem in the short- and long-term?

Operational Considerations for Capability Assessments and Strategic Planning
Operational planning activities for emergency response communications projects may include SOPs, training and exercises, and regular use for the equipment. Planning for such activities should consider the communication needs and requirements of the emergency response community, including:

- With whom the agency or jurisdiction needs to communicate
- How the agency or jurisdiction needs to communicate
- What information needs to be exchanged
- When the agency or jurisdiction needs to communicate and exchange information (i.e., daily, weekly, infrequently)
- Under what circumstances the agency needs to communicate (i.e., during frequently occurring emergencies, major crimes or incidents, large-scale disasters)
- Whether regional communications applications are considered for daily use (i.e., mutual aid and regional coordinating centers)

Technical Considerations for Capability Assessments and Strategic Planning
Technical planning activities for emergency response communications projects may include such items as needs and requirements assessments, development of the system network architecture, propagation studies, and similar technical proposals.

The following list outlines items that should be included in planning for such activities:

- All interoperability resources available—including radio caches, gateways, shared channels, shared systems (including system type, mode, band, and manufacturer), and software and systems allowing for exchange of information across disciplines and jurisdictions (such as emergency management software, and computer-aided dispatch software)

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- All agencies to which the interoperability resources are available
- Scale of the system—local, regional, multi-jurisdictional, statewide, or national
- Coverage—the system footprint of all areas covered
- Capacity—channel capacity and radio capacity within the existing systems
- Identification of capabilities by site including the identification of site users
- Current interoperability capabilities with other systems
- Compatibility with the Project 25 (P25) suite of standards (see Section 4.2 for additional information)
- For data-related systems, use of National Information Exchange Model (NIEM) Extensible Markup Language (XML) standards and Organization for the Advancement of Structured Information Standards (OASIS) Emergency Data Exchange Language (EDXL) standards in systems and software (see Section 4.2 for additional information)
- Internal and external security requirements in the architecture to secure information and maintain privacy levels for voice and data, as required by law
- Whether the infrastructure is shared with any other agency or organization and is owned or leased
- Whether equipment locations/sites are shared, owned, and/or leased
- Radio frequencies used to communicate with other emergency response agencies
- Channels designated solely for communicating with other agencies
- Types of equipment that can immediately be deployed to provide short-term solutions for improved communications
- Primary radio language used by the agency when communicating with other agencies or organizations (e.g., "plain" English or code)
- Type of topography or terrain in which the agency operates
- Types of structures in which the agency needs to communicate (e.g., tunnels or high-rise buildings)

Implementation and Management Considerations
Consistent leadership and management are needed to ensure that the planning, equipment procurement, training, and funding are in place when developing an emergency response communications improvement or interoperability project. Frequently, when multiple agencies or jurisdictions are involved, such management takes the form of a governing body that makes decisions, solicits funding, and oversees the implementation of an interoperability initiative. Activities during implementation and management may include but are not limited to procurement of equipment, development of SOPs, and coordination of training and exercises. Organizations that govern such projects must be comprised of the relevant law enforcement, fire response, and emergency agencies.

Section 4.2 – Equipment Acquisition

Communications systems and equipment are expensive and technically complex. Before a procurement decision is made, an assessment must be made of the current communications system capabilities, as outlined in the previous section. In addition, funds can be directed at the improvement of existing systems, where applicable, rather than at the development of completely new systems or infrastructure using proprietary or non-proprietary equipment.

Grant funding in regards to systems and equipment may be used for:

- Building emergency response communications systems and equipment
- Upgrading or enhancing emergency response communication systems and equipment to include the procurement of interoperable solutions
- Replacing emergency response communication systems and equipment
- Maintaining emergency response communication systems and equipment

Applicants requesting funding for equipment acquisition should consider the principles and guidelines discussed in the following sections.

Priority Areas

Before making equipment acquisition decisions, applicants should ensure that they meet two basic communications needs—operability and incident-level capabilities. If applicants have not met these needs in their jurisdiction, they should make equipment acquisitions to meet them first, subject to the statutory authority of the grantor agency or the objectives of the grant program if the applicant is seeking Federal grant funding.

Operability. The first priority of Federal funding for improving emergency response communications is to provide within an organization basic, operable communications that has safety as the overriding consideration.

Incident-Level Communications Capabilities. Agencies are encouraged to consider plans that enable them to achieve, at a minimum, incident-level interoperability. This means ensuring the ability of incident operations section staff to adequately communicate with one another and their respective command centers within one hour of an incident. Agencies are encouraged to explore any and all inexpensive and innovate ways to ensure incident-level interoperability. While such incident management interoperability can provide an interim solution to an area's interoperability needs, such solutions should always be in support of long-term interoperability by building upon or accelerating long-term strategies and efforts.

Standards

Land Mobile Radio (LMR) Systems

When procuring equipment for communication system development and expansion, a standards-based approach should be used to begin migration to multi-jurisdictional and multi-disciplinary interoperability. Specifically, all new digital voice systems should be compliant with the Project 25 (P25) suite of standards. This recommendation is intended for government-owned or -leased digital land mobile public safety radio equipment. Its purpose is to make sure that such equipment or systems are capable of interoperating with other digital emergency response land mobile equipment or systems. It is not intended to apply to commercial services that offer other types of interoperability solutions. Further, it does not exclude any application if the application demonstrates that the system or equipment being proposed will lead to enhanced interoperability.

With input from the user community, these standards have been developed to allow for backward compatibility with existing digital and analog systems and to provide for interoperability in future systems. The FCC has chosen the P25 suite of standards for voice and low-to-moderate speed data interoperability in the new nationwide 700 MHz frequency band and the Integrated Wireless Network (IWN) of the U.S. Homeland Security, Justice, and Treasury Departments has chosen the P25 suite of standards for their new radio equipment. The U.S. Department of Defense has also endorsed P25 for new LMR (Land Mobile Radio) systems.

This guidance does not preclude funding of non-P25 equipment when there are compelling reasons for using other solutions. However, the first priority of federal funding (subject to the statutory authority of the grantor agency or the objectives of the grant program if the applicant is seeking Federal grant funding) for improving public safety communications is to provide basic, operable communications within a department with safety as the overriding consideration. Funding requests by agencies to replace or add radio equipment to an existing non-P25 system (i.e., procurement of new portables on an existing analog system) will be considered if there is an explanation as to how their radio selection will allow for improving interoperability or eventual migration to interoperable systems. Absent these compelling reasons, SAFECOM intends that P25 equipment will be preferred for LMR systems to which the standard applies.

Beginning in FY 2007 grant applicants purchasing P25 equipment must obtain documented evidence from the manufacturer that the equipment has been tested to and passed all of the applicable, published, normative P25 compliance assessment test procedures for performance, conformance, and interoperability as defined in an explanatory addendum, which can be found at www.safecomprogram.gov/SAFECOM/grant/default.htm. This documentation shall be in the form of a Supplier's Declaration of Compliance (SDoC) prepared in accordance with ISO/IEC 17050-1. Further, the relevant compliance assessment test reports which form the basis for the SDoC shall be prepared in accordance with the NIST publication: "Procedures and General Requirements for Compliance Assessment of Project 25 Land Mobile Radio Equipment."

Data-Related Information Sharing Systems
To support homeland security, emergency responses, and justice information sharing, grant applicants should use the latest NIEM specifications and guidelines on the use of XML, as follows:

- Use NIEM 1.0 or later for information sharing in production systems. NIEM 1.0 (beta) was released in June 2006; the full production version is scheduled for October 2006.

- Until the production release of NIEM 1.0, the latest NIEM beta specifications and guidance should be used only for pilots and prototype systems.

Additional information about the required use of NIEM specifications and guidelines is available at http://www.niem.gov. If there is any question or comment about the use of NIEM specifications and guidelines, please submit it to information@niem.gov.

Further, any systems, developmental activities, or services procured with grant funding involving information relating to emergency response, including the exchange of incident management or alerts, should comply with the OASIS EDXL standards. Compliance should include the Common Alerting Protocol (CAP), version 1.1 or latest version, and the EDXL Distribution Element (DE), version 1.0 or latest version. More information on these standards can be found at www.oasis-open.org.

This guidance does not preclude funding of non-NIEM or non–OASIS EDXL-compliant systems, when there are compelling reasons for using other solutions. Absent such compelling reasons, the NIEM and OASIS EDXL standards identified above are the preferred standards.

Functional Requirements
When planning for the development of communications systems and looking to ensure both operability and interoperability, emergency responders should employ a standards-based network of networks approach. When procuring voice and data communications equipment, emergency responders should seek equipment that supports specific functional requirements, or equipment capabilities. A list of functional requirements for various components of voice and data communications systems is included in

Appendix A. These requirements outline the minimum capabilities that equipment should have for effective interoperable procurement selections.

Section 4.3 – Training and Exercises

To use equipment properly and effectively in emergencies, personnel must be trained through joint exercises that allow them to practice SOPs, become familiar with the equipment, and enhance their preparedness in responding to all types of emergencies. Eligible grant applicants should include multi-disciplinary and multi-jurisdictional training in their overall emergency response communications plans.

Consider the following topics in the development of training and exercise plans:

- Participation from all levels and functions of emergency response (i.e., local, state, Federal, fire, law enforcement, emergency medical services)
- The frequency of training
- Who will conduct the training
- The site at which training will be held (on-site or specified training facility)
- Maintenance efforts to keep personnel up-to-date with changes in procedure, equipment functions, or other relevant policies
- Incorporating lessons learned from training exercises in operational procedures
- Implementing post-exercise evaluations and analyses

No matter the level of management, planning, technology, SOPs, and training that an agency adopts, interoperability solutions must be routinely in training and in daily use so that agency staff becomes and remains familiar with the equipment and procedures. Emergency response personnel in high-stress situations depend on using equipment and procedures with which they are familiar and comfortable. Unless both operable and interoperable communications solutions are used as part of routine, daily operations, as applicable, they will not be used during major incidents. As with an agency's general staff, its supervisors and command staff must likewise be familiar with the equipment and protocols required to use the various communications solutions that are available to the agency if they are going to direct its activation. The best way to bring about such familiarity is daily use of and training with the solutions and their related equipment.

Appendix D - Level III Hazardous Materials Emergency Response Agreement MOU Example

THIS AGREEMENT is made this 1st day of July, 2004, by and between the Commonwealth of Virginia Department of Emergency Management (VDEM) and ___(JURISDICTION),___ a political subdivision in the Commonwealth of Virginia.

WHEREAS, there exists within the Commonwealth of Virginia a potential for serious accidents and releases involving hazardous materials; and

WHEREAS, the public health, safety, and welfare may be threatened as a result of these incidents involving hazardous materials; and

WHEREAS, the Coordinator of the Virginia Department of Emergency Management is authorized by Virginia Code Section
44-146.36 to enter into agreements with political subdivisions to provide hazardous materials emergency response within a specific geographical area of the Commonwealth; and

WHEREAS, the (JURISDICTION) Fire Department has established a Hazardous Materials Response Team, trained and equipped to safely operate at hazardous materials incidents; and

WHEREAS, the (JURISDICTION) and VDEM desire to enhance the Commonwealth's program to protect the environment and the health, safety, and welfare of the people of the Commonwealth from the dangers and potential dangers of accidents and incidents involving hazardous materials by entering into a cost-sharing agreement for the (JURISDICTION) to provide hazardous materials emergency response in the (JURISDICTION) and selected jurisdictions within the Commonwealth of Virginia.

NOW, THEREFORE WITNESSETH that, for and in consideration of the promises and of the mutual covenants herein contained, the (JURISDICTION) and VDEM agree as follows:
1.   DEFINITIONS: The terms set forth below shall have the following meanings unless the context clearly requires otherwise:
   A.   Level III Response - Response to an incident involving hazardous materials by the (JURISDICTION) Hazardous Materials Team at the request of VDEM or by notification from the (JURISDICTION) to VDEM of a team response to such an incident. Such response begins when either VDEM or the (JURISDICTION) makes the required notification, and terminates after the response team returns to and is ready for service at their home base. See Appendix A.
   B.   Training - Training in hazardous materials emergency response including, but not limited to, the following subject areas: First Responder-Awareness, First Responder-Operations, Hazardous Materials Technician, Chemistry of Hazardous Materials, and Advanced Tactical Control. Radiological response is not mandatory but is highly recommended.
   C. Team: (JURISDICTION) Fire Department Hazardous Materials Response Team.
   D.   Hazardous Materials: Hazardous materials as defined in Virginia Code Section 44-146.34.
   E.   Certification: VDEM will certify all team members under the provisions of U.S. OSHA 29 CFR 1910.120 (q). Individuals can be certified as Technician and/or Specialist. To obtain a Technician certificate, the member must have completed Hazardous Materials First Responder-Awareness, Hazardous Materials First Responder-Operations, and the Hazardous Materials Technician course. To obtain a Specialist certificate, the individual

must meet the Technician standards, plus complete Chemistry of Hazardous Materials and Advanced Tactical Control.

2. RESPONSIBILITIES OF THE (JURISDICTION):

A. The (JURISDICTION) agrees to maintain Level III training proficiency for all team members by having them take, as a minimum, 24 hours of continuing education annually and participate in annual drills or exercises developed or sponsored by VDEM.

B. The (JURISDICTION) agrees to provide:

1. A group of _____ hazardous materials team members. As a minimum, _____ percent of the members must have a Specialist certificate. In addition, only certified personnel will be dispatched on VDEM responses.

2. Necessary response vehicles and equipment with adequate garaging, storage, and maintenance thereof, in accordance with reasonable safety and operating standards.

3. Team response 24 hours per day, seven days per week, at the request of VDEM, within 30 minutes of notification. See Appendix A.

4. Access to team equipment and to team training records by the VDEM regional Hazardous Materials Officer (HMO) during normal business hours, by appointment only. A roster of team personnel will be furnished to the HMO on a semi-annual basis.

5. Financial records to VDEM for previously conducted baseline medical examinations for all team members and leaders, as requested.

6. To VDEM within ten business days (excluding weekends and holidays) following the close of an incident, an itemized written statement of the expenses incurred for a Level III response, including:

   a. Salaries, wages, fringe benefit costs of response personnel, and other expenses (in accordance with state guidelines) incurred during a response. Time billed will be from the time (JURISDICTION) response team personnel are notified to respond until they are released and arrive in home quarters. Up to two hours for equipment cleanup (when necessary) are authorized.

   b. All salaries and wages associated with call- back personnel.

   c. Costs of repair and replacement of supplies consumed or damaged during a response, excluding vehicles.

   d. Equipment rate as follows:

HAZMAT TRUCK	$200 per day (minimum charge per response)
HAZMAT TRAILERS	$100 per day (minimum charge per response)
COMMAND POST	$100 per day (minimum charge per response)
PUMPER	$125 per day (minimum charge per response)
AUTOMOBILES/PICKUPS/ CRASH TRUCKS/UTILITY VEHICLES/AMBULANCES/ETC.	$75 each per day or $.27 per mile, whichever is larger

     C.   For the life of this agreement, the (JURISDICTION) will maintain, with VDEM financial assistance, a minimum Level III response equipment inventory as specified in Appendix B attached hereto. In addition, an inventory of team equipment will be furnished annually to the VDEM HMO assigned to the team.

     D.   The (JURISDICTION) agrees to comply with Virginia Standards for General Industry, as found in 29 CFR 1910 and, in particular, the regulations found in 29 CFR Part 1910.120, <u>Hazardous Waste and Emergency Response</u>.

3.   <u>RESPONSIBILITIES OF VDEM</u>:

     A.   VDEM agrees to provide:

1.   Funding within the constraints of the budget authorized by the General Assembly, to pay the cost of equipment required to complete and maintain the minimum Level III inventory as specified by VDEM in Appendix B hereto.

     2.   All required Level III training. If training is held outside the (JURISDICTION), cost of travel and per diem for each member will be paid.

     3.   Workers' compensation coverage for response team members injured or who become ill during or as a result of a Level III response in accordance with the Workers' Compensation Act.

     4.   A VDEM HMO on scene at Level III responses, whether within or outside the (JURISDICTION). The VDEM HMO will provide technical advice and equipment and act as liaison to the local agency requesting assistance if outside the (JURISDICTION).

     B.   VDEM shall request Level III response team assistance in accordance with the procedures set forth in Appendix A.

     C.   VDEM shall reimburse directly to the (JURISDICTION) all eligible expenses incurred during a VDEM-authorized Level III response, within 60 days following receipt of an itemized statement of expenses. See Appendix C.

     D.   VDEM agrees to pay the cost of annual medical monitoring of team personnel up to $300 per team member, dependent upon the constraints of the budget authorized by the Virginia General Assembly. See Appendix E for guidelines for annual physicals. In addition, VDEM agrees to pay all costs associated with examination and treatment, including, but not limited to, hospital costs for illness or injury suspected of being caused or actually caused by exposure to hazardous materials as a result of Level III response activities, within 60 days following receipt of an itemized statement of costs.

     E.   VDEM agrees to pay up to $1,000 annually to support drills and/or exercises involving the full team.

     F.   VDEM agrees to pay the (JURISDICTION) actual cost of damage, up to $1,000, for each vehicle damaged as a result of a VDEM-authorized response. This is the maximum VDEM will pay for any one vehicle, regardless of the amount of damage. If a third party is involved in an accident and is at fault, collection will be attempted by the (JURISDICTION) from the third party before VDEM will reimburse.

     G.   VDEM agrees that the (JURISDICTION) Hazardous Materials Team is an authorized agent of VDEM when responding to a Level III incident as described in this agreement. When the (JURISDICTION) Team is an authorized agent of VDEM, the (JURISDICTION) Team is under the Risk Management Plan for Public Liability provided in Virginia Code Section 2.2-1837 which provides protection against liability from claims made against an authorized agent while acting in an authorized governmental capacity and in the scope of the authorization.

4.   <u>USE OF VDEM FUNDS</u>: All funds reimbursed to or passed through the (JURISDICTION) from VDEM pursuant to this agreement shall be used only to provide for hazardous materials response

program expenses, and shall not be used to supplant or replace funds for any other program or activity.

5. <u>REFUSAL TO RESPOND</u>: The (JURISDICTION) reserves the right to refuse to respond to a VDEM request for Level III response if the (JURISDICTION) Team is already committed to other emergency activities.

6. <u>SERVICE AREA</u>: See Appendix D.

7. <u>TERMINATION</u>: This agreement may be terminated by either party upon 30 days' written notice thereof to the other party.

8. <u>AMENDMENTS</u>: This agreement may be amended in writing and by mutual agreement of all parties.

9. Notwithstanding anything to the contrary contained in this agreement, equipment purchased during this agreement shall become the property of the (JURISDICTION) after this agreement terminates.

10. This agreement shall not preempt any existing mutual aid agreement (written or verbal) now in effect by the (JURISDICTION).

11. <u>ANNUAL APPROPRIATION</u>: This agreement is subject to annual appropriations by the team's local governing authority. In addition, this agreement is subject to appropriations and budget constraints authorized by the Virginia General Assembly.

12. <u>DURATION OF CONTRACT</u>: This contract is to be in effect beginning _____, and will expire _____.

IN WITNESS WHEREOF, the parties have caused this agreement to be executed by the following duly authorized persons:

VIRGINIA DEPARTMENT OF EMERGENCY MANAGEMENT
BY: _____
                              State Coordinator
DATE: _____
(JURISDICTION)
BY: _____

TITLE: _____

DATE: _____

APPENDIX A

RESPONSE PROCEDURES

There are two basic scenarios for a Level III response requiring a regional team: an incident outside the jurisdictions of a regional hazardous materials response team, and an incident within their jurisdictions. With these two possibilities, certain ground rules must be applied before a state Level III response is authorized and, subsequently, a regional hazardous materials response team dispatched and reimbursement authorized. Response procedures are:

1.   Virginia Department of Emergency Management (VDEM) is notified of the incident.
2.   VDEM regional Hazardous Materials Officer (HMO) for the jurisdiction involved is contacted and, in turn, contacts the calling party.
3.   The regional VDEM HMO, in coordination with the affected jurisdiction, declares a Level III response.
4.   VDEM HMO responds along with the regional Level III team.

For a Level III incident within a response team's home jurisdiction, the notification process is the same as above. VDEM will respond with the team and treat the incident as a Level III response.

LINE OF AUTHORITY:
1.   When the (JURISDICTION) Regional Hazardous Materials Response Team is activated, the team will report to the VDEM HMO. If the VDEM HMO is not on scene, the team will report to the local fire chief or the chief's designee having jurisdiction.
2.   The (JURISDICTION) Regional Hazardous Materials Response Team Leader shall maintain operational authority over the response team members. The team leader shall, in conjunction with the VDEM HMO, determine the number of response team personnel required at the incident scene. The VDEM HMO will determine the number of personnel required during the initial response phase of an incident.
3.   In the event there is a conflict in management decisions between the local authority, the VDEM HMO, and the regional hazardous materials response team leader, or if the VDEM HMO initiates or fails to initiate any action or decision that would jeopardize the safety of the regional hazardous materials response personnel or equipment, the regional hazardous materials response team leader shall have the authority to terminate the regional response and return to their locality. There shall be no recourse against the regional hazardous materials team leader, the regional hazardous materials team personnel, or to the (JURISDICTION).

STAGES OF RESPONSE:
Not all hazardous materials incidents require the action of a full team, i.e., 20-30 personnel. The stage of response will be dependent upon the severity of the incident, based upon on scene verification, the probable severity of an incident based upon verbal reports from reliable sources. Stages of response will be classified in three categories. It is the responsibility of the VDEM HMO to classify the response.
Stage 1 - Initial response requested by VDEM for a response team with a maximum of 10 response personnel. The numbers can be upgraded as the incident proceeds.
Stage 2 - Increased response personnel, up to 20 team members.
Stage 3 - Full response by maximum team members as the team(s) can provide.
VDEM reserves the authority to scale down or request increase in response personnel as the situation warrants.

INVESTIGATIVE RESPONSE:

There are times when a VDEM HMO is not immediately available to respond to a jurisdiction when requested to investigate a possible hazardous materials incident. In these cases, the (JURISDICTION) will be requested to dispatch a maximum of three hazardous materials team members to perform an investigative response. On scene the team member will be asked to evaluate the problem and report back to the VDEM HMO. Once all of the information is gathered, the HMO will make the decision as to elevate the response or direct whatever action is necessary to mitigate the problem. The (JURISDICTION) will be reimbursed at the normal rate for an investigative response.

(Appendix B was removed due to its lack of relevance)

APPENDIX C

REIMBURSEMENT PROCEDURES

These procedures apply regardless of where the incident occurs in Virginia. Level III jurisdictions will not be penalized if a Level III response is required within their jurisdiction and will be reimbursed for the response.

Reimbursement procedures for regional Level III teams are:
1. Payment of salaries, wages, fringe benefit costs of response personnel, and other expenses (in accordance with state guidelines) incurred during a response. Time billed will be from the time (JURISDICTION) response team personnel are notified to respond until they are released and arrive in home quarters. Up to two hours for equipment cleanup (when necessary) are authorized and also costs associated with call-back personnel.
2. Payment for or re-supply of expendable materials used during the incident.
3. Payment for or replacement of nonexpendable items (suits, air packs, etc.) damaged beyond economical repair. A statement from the (JURISDICTION) will be required documenting extent of damage, length of time in use, and condition of item at time of damage.
4. Payment for repair of nonexpendable items.
5. Payment of workers' compensation claims.
6. Payment for vehicle insurance deductible only (up to $1,000) if the vehicle is involved in an accident on a Level III response. If a third party is involved in an incident and is at fault, collection will be attempted by the (JURISDICTION) from the third party before VDEM will reimburse.

VDEM will accept an itemized statement, with all responding personnel listed, plus all equipment and vehicles used, verified by the VDEM regional HMO, from the Level III jurisdiction and will provide direct reimbursement to the individual jurisdictions. Payment will be made within 60 days after receipt of the verified bill at the VDEM Richmond office.